

# 7.14 Environmental Justice

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The CALFED Bay-Delta Program could result in beneficial or adverse effects on minority or low-income populations. Analysis at the project-specific level is needed to fully determine effects related to environmental justice.

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## 7.14 Environmental Justice

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### 7.14.1 SUMMARY

Environmental justice refers to the fair treatment of people of all races, cultures, and income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Executive Order 12898, signed by President Clinton in 1994, requires federal government agencies to consider the potential for their actions or policies to place disproportionately high adverse human health or environmental effects on minority and low-income populations. This section summarizes baseline demographic data for low-income, minority, and tribal populations used in the environmental justice impact analysis.

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Federal agencies must consider the potential for their actions or policies to place disproportionately high adverse human health or environmental effects on minority and low-income populations.

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An analysis of environmental justice includes identifying low-income and minority populations that could be affected by the CALFED Bay-Delta Program (Program) and assessing whether these populations, if present, would incur disproportionate adverse human health or environmental effects compared to the rest of the population. The best way to evaluate environmental justice effects is at the project-specific level, when specific plans can be analyzed and specific populations identified to determine whether and how a project could disproportionately affect minorities or low-income populations. As specific Program plans are proposed, more detailed environmental justice impact analyses will be conducted.

In the Program study area, people living in predominately rural areas tend to have lower incomes, higher poverty rates, and higher unemployment rates than those living in urban areas. Urban centers offer the greatest employment opportunities for all skill levels, while employment opportunities in rural areas tend to involve industries such as agriculture, logging, and fishing. Urban centers also typically contain the social structure and programs to assist minority and low-income populations. The analysis of potential environmental justice issues focuses on farm workers and agribusiness workers because they are more likely to be directly affected by Program elements than minority and low-income populations in urban areas.



## 7.14.2 AREAS OF CONTROVERSY

Areas of controversy as defined by CEQA involve differences of opinion among technical experts or information that is not available and cannot be readily obtained. According to this definition, no areas of controversy are related to environmental justice.

## 7.14.3 AFFECTED ENVIRONMENT/ EXISTING CONDITIONS

In the Program study area, people living in predominately rural areas tend to have lower incomes, higher poverty rates, and higher unemployment rates than those living in urban areas. However, San Francisco and Los Angeles counties have high income levels and some of the highest poverty rates in the state. Poverty rates are higher among minority ethnic groups. In all regions except the Sacramento River Region, pockets of prosperity have an "averaging effect" of raising average personal income and lowering average poverty and unemployment rates. Annual per capita income in the study area ranges from \$10,000 in the Tulare Lake area (Other SWP and CVP Service Areas) and Yuba County (Sacramento River Region) to \$28,000 in Marin County (Bay Region).

Urban centers offer the greatest employment opportunities for all skill levels, while employment opportunities in rural areas tend to involve industries such as agriculture, logging, and fishing. Urban centers also typically contain the social structure and programs to assist minority and low-income populations. The analysis of potential environmental justice issues focuses on farm workers and agribusiness workers because they are more likely to be directly affected by Program elements than minority and low-income populations in urban areas.

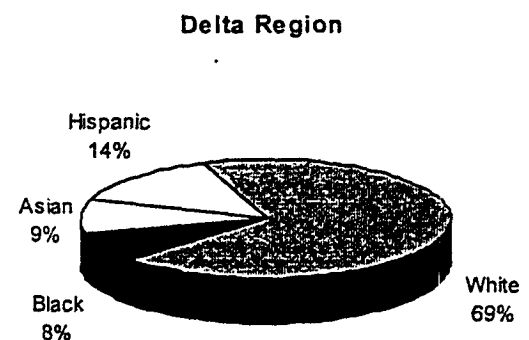
By 1983, an estimated 90% of the seasonal farm laborers in California were Mexicans or Chicanos, while nationwide the figure was 60%. Most migrant farm workers are either American citizens or are working in the country legally. The U.S. Department of Labor estimates that about 25% of migrant farm workers are illegal immigrants. Most farm workers earn annual wages of less than \$7,500.

Table 7.14-1 presents the percentage of the population below poverty level by Program region.

Poverty rates are higher among minority ethnic groups. In all regions except the Sacramento River Region, pockets of prosperity have an "averaging effect" of raising average personal income and lowering average poverty and unemployment rates.

### 7.14.3.1 DELTA REGION

In 1996, the population in the Delta Region was 2,362,514. The racial composition in the Delta Region is identical to the composition in the Program study area (Figure 7.14-1). The



*Figure 7.14-1. Racial Composition of the Delta Region*



percentage of the Delta Region population below the poverty level was approximately 11%, which is slightly less than the state percentage of 12%. Approximately 69% of the population was white, 8% was black, and 9% was Asian. Approximately 14% of the population was Hispanic, which was lower than the state percentage of 25%.

*Table 7.14-1. Percentage of Project Area Population below Poverty Level (by Region)*

CENSUS AREA	TOTAL POPULATION	PERCENTAGE OF POPULATION BELOW POVERTY LEVEL
Delta Region	1,572,342	11
Sacramento River Region	5,037,527	9
San Joaquin River Region	1,530,179	13
Other SWP and CVP Service Areas	17,307,700	13
State of California	29,760,021	12

Source:

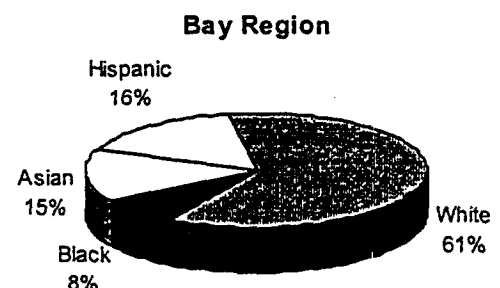
U.S. Bureau of Census, from <http://venus.census.gov/cdrom/lookup/CMD=LIST/DB=C90STF3A/>.

Because farm workers tend to migrate seasonally and live in temporary housing, it is difficult to obtain reliable work force numbers. Based on a 1990 Census of Population and Housing, the farm worker population in the Delta Region included approximately 5,500 farm workers. The actual numbers likely are higher than this figure. Of the farm labor force counted in the census, 77% was Hispanic, 15% white, 7% Asian/Pacific Islander, and less than 1% each was black or American Indian/Eskimo Aleutian.

### 7.14.3.2 BAY REGION

In 1996, population in the Bay Region was 5,498,964. Approximately 61% of the population was white, 8% was black, and 15% was Asian (Figure 7.14-2). Approximately 16% of the population was Hispanic, which is lower than the state percentage of 25%. The economic base in this area is industrial and agricultural. Major urban areas include San Francisco, Oakland, and San Jose. Rural communities include Napa County. The percentage of the Bay Region population below the poverty level was approximately 9%, which is less than the state percentage of 12%.

For the same reasons outlined for the Delta Region, farm worker populations are likely to be under reported. In the 1990 Census of Population and Housing, the farm worker population in the Bay Region was approximately 12,200. Of the farm labor force counted in



*Figure 7.14-2. Racial Composition of the Bay Region*



the census, 82% was Hispanic, 14% white, 2% Asian/Pacific Islander, and less than 1% each was black or American Indian/Eskimo Aleutian.

### 7.14.3.3 SACRAMENTO RIVER REGION

The Sacramento River Region population in 1996 was 1,666,650. Approximately 82% of the population was white, 4% was black, and 5% was Asian (Figure 7.14-3). Approximately 10% of the population was Hispanic, which is lower than the state percentage of 25%. The percentage of the Sacramento River Region population below the poverty level was approximately 13%, which is slightly higher than the state percentage of 12%.

For the same reasons outlined for the Delta Region, farm worker populations are likely to be under reported. In the 1990 Census of Population and Housing, the farm worker population in the Sacramento River Region was approximately 11,600. Of the farm labor force counted in the census, 59% was Hispanic, 31% white, 8% Asian/Pacific Islander, and less than 1% each was black or American Indian/Eskimo Aleutian.

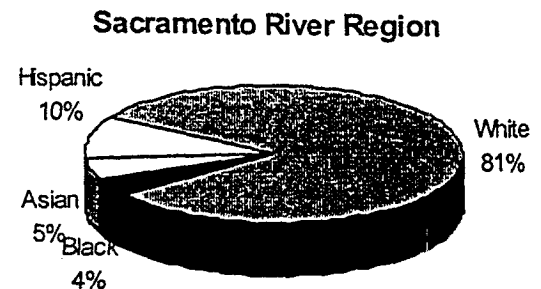


Figure 7.14-3. Racial Composition of the Sacramento River Region

### 7.14.3.4 SAN JOAQUIN RIVER REGION

The 1996 San Joaquin River Region population was 3,004,222. Approximately 62% of the population was white, 4% was black, and 6% was Asian (Figure 7.14-4). Approximately 30% of the population was Hispanic, which is higher than the state percentage of 25%. The percentage of the San Joaquin River Region population below the poverty level was approximately 18%, which is higher than the state percentage of 12%.

For the same reasons outlined for the Delta Region, farm worker populations are likely to be under reported. In the 1990 Census of Population and Housing, the farm worker population in the San Joaquin River Region was approximately 74,200. Of the farm labor force counted in the census, 84% was Hispanic, 12% white, 4% Asian/Pacific Islander, and less than 1% each was black or American Indian/Eskimo Aleutian.

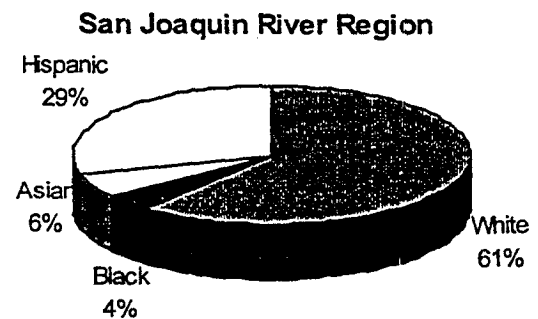


Figure 7.14-4. Racial Composition of the San Joaquin River Region

### 7.14.3.5 OTHER SWP AND CVP SERVICE AREAS

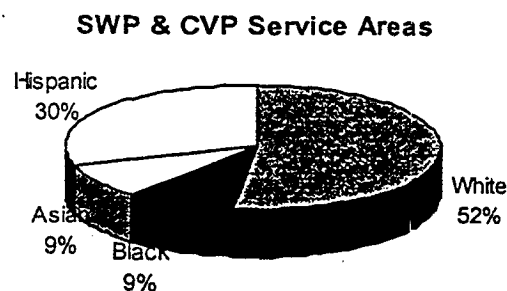
Two distinct, noncontiguous areas are included in the Other SWP and CVP Service Areas: in the north are the San Felipe Division's CVP and the South Bay SWP service



areas; and to the south are the SWP service areas. The northern section of this region encompasses parts of the central coast counties of Santa Clara, San Benito, Santa Cruz, and Monterey. The southern portion includes parts of Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego, San Luis Obispo, Santa Barbara, and Ventura Counties.

The 1996 population in the Other SWP and CVP Service Areas was 19,159,450. Approximately 52% of the population was white, 9% was black, and 9% was Asian (Figure 7.14-5). Approximately 30% of the population was Hispanic, which is higher than the state percentage of 25%. The economic base in this region is industrial and agricultural. Major urban areas include San Jose, Los Angeles, and San Diego. Rural communities include Watsonville, Hollister, and Gilroy. The percentage of the population in this region below the poverty level was approximately 13%, which is slightly higher than the state percentage of 12%.

For the same reasons outlined for the Delta Region, farm worker populations are likely to be under reported. In the 1990 Census of Population and Housing, the farm worker population in Other SWP and CVP Service Areas was about 45,000. Of the farm labor force counted in the census, 87% was Hispanic, 10% white, 2% Asian/Pacific Islander, and less than 1% each was black or American Indian/Eskimo Aleutian.



*Figure 7.14-5. Racial Composition of the Other SWP and CVP Service Areas*

## 7.14.4 ASSESSMENT METHODS

Program actions were evaluated to determine whether any minority or economic group could be disproportionately affected by an environmental or human health hazard. The "Final Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses" was used to help formulate the Program's environmental justice impact analysis. In this document, a minority population may be present if the minority population percentage of the affected area is "meaningfully greater" than the minority population percentage in the general population or other "appropriate unit of geographic analysis."

Program actions were evaluated to determine whether any minority or economic group could be disproportionately affected by an environmental or human health hazard.

The U.S. Census Bureau poverty thresholds were used to identify low-income populations. According to the thresholds, a single person with income below \$8,480 is considered low income. For a family of four, the threshold is \$16,588.

The Final Guidance for Incorporating Environmental Justice Concerns establishes an analytical method of delineating both potential effects and the potentially affected population through a screening process. The following screening questions are used:

- Does the potentially affected community include minority or low-income populations or tribal resources?



- Are significant adverse environmental or human health effects likely to fall disproportionately on minority or low-income populations or tribal resources?

Demographic data on race, low-income populations, and tribal resources are provided in Section 7.14.3 to establish the baseline information required for the screening level analysis. Affected populations were considered to be minority when the minority population percentage was meaningfully greater than the minority population percentage of similar geographic areas. Project-specific environmental justice analysis should further serve to identify potentially affected low-income or minority populations, or tribal resources.

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Affected populations were considered to be minority when the minority population percentage was meaningfully greater than the minority population percentage of similar geographic areas.

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### 7.14.5 CRITERIA FOR DETERMINING EFFECTS

Potential effects related to environmental justice could result if implementing the Preferred Program Alternative or another alternative results in disproportionately significant adverse environmental or human health effects on low-income or minority populations. Considering environmental justice issues is a federal requirement; CEQA has no significance criteria for this issue.

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### 7.14.6 NO ACTION ALTERNATIVE

California's population will continue to grow and is projected to reach more than 45 million by 2020. The trend for in-migration from other states, a significant contributor to California's population growth, also is likely to continue. Since 1990, the population segments experiencing the greatest growth are Hispanic and Asian/Pacific Islander. About 12% of the state's population is considered to be living in poverty. Under the No Action Alternative, existing minority and low-income population trends are expected to continue.

The regional economic structure is expected to remain similar to existing conditions. Service and high-tech industries should continue their fast growth rate; heavy manufacturing, mining, and agriculture sectors likely will experience slight declines. Overall baseline levels of production likely will continue to grow during the next 20 years at a rate similar to the forecasted population growth.

The number of agricultural jobs may increase in some areas due to projected changes in crop production to higher value and more labor-intensive crops. This change could affect farm workers and agribusiness workers, although agricultural employment would remain seasonal. Improvements in harvesting and irrigation technologies could eliminate or change farm labor needs. Changes to population, crop production, and technology could result in a decrease in opportunities or duration of employment. This decrease could

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Under the No Action Alternative, changes to population, crop production, and technology could result in a decrease in opportunities or duration of employment. This decrease could create an increased need for social services to provide food, health care, and housing for those facing economic hardship.

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## 7.14.7 CONSEQUENCES: PROGRAM ELEMENTS COMMON TO ALL ALTERNATIVES

### 7.14.7.1 ALL REGIONS

#### *Ecosystem Restoration Program*

The Ecosystem Restoration Program could benefit minority or low-income populations in the short term by providing restoration-related employment opportunities, and in the long term by providing restored fishing and hunting habitat. Agricultural land conversion could reduce the number of jobs for farm workers and agribusiness workers. This reduction could be a potential adverse effect, depending on the number of jobs lost and the extent of the mitigation efforts. Land in other areas could be developed for agriculture, for example in the Bay Region, which could lessen this effect. Those laborers with limited job or English language skills who also lack basic education levels could experience more difficulty finding new employment than laborers with better skills. Existing social services or structures could be affected by an increased demand for their programs. This program could include other potential adverse direct effects (such as moving people from potential restoration areas) or indirect effects (such as reducing the accessibility of groundwater supplies). Groundwater effects could disproportionately affect rural minority and low-income populations that rely on well water. Possible methods that could be used to alleviate these effects include providing skill training and employment relocation, providing project jobs in positions where skills can be transferred or where minimal retraining is required, providing housing relocation, and developing systems to ensure adequate water supply.

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The Ecosystem Restoration Program could benefit minority or low-income populations in the short term by providing restoration-related employment opportunities and in the long term by providing restored fishing and hunting habitat.

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The Ecosystem Restoration Program could result in a negligible effect on urban land uses but could require relocating major utility infrastructure, such as power poles. Since utility infrastructure relocation likely would occur on less economically viable land, where low-income people and minorities are more likely to reside, utility relocations could disproportionately affect these populations. These relocations could result in adverse effects related to environmental justice, depending on their location. Possible methods that could be used to alleviate these effects include avoiding utility relocation whenever possible or providing project jobs during relocation.

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Since utility infrastructure relocation likely would occur on less economically viable land, where low-income people and minorities are more likely to reside, utility relocations could disproportionately affect these populations.

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#### *Water Quality Program*

The Water Quality Program could result in reduced production costs and create higher crop yields and greater crop selection flexibility in the long term, which could benefit





farm workers. In the San Joaquin River Region, retirement of lands with water quality problems could adversely affect agricultural jobs in the region. These lands are forecast for retirement under the No Action Alternative; however, it is likely that the lands would be retired sooner under the Program than under the No Action Alternative. The loss of these irrigated lands would result in an adverse social effect from loss of jobs associated with retired land.

### *Levee System Integrity Program*

In the long term, the Levee System Integrity Program could benefit minority and low-income populations (only in the Delta Region) by providing a certain level of protection from flooding. Flood protection could reduce the risk of death and economic devastation. In the short-term, however, the program could result in potential adverse effects on minority and low-income populations. Farmland retirement could affect local economies and social well-being because of changes in employment and income. These changes could disproportionately affect minority and low-income populations, including migrant agricultural workers. Some low-income houses on or near the levees could be displaced under the Suisun Marsh component of the Levee System Integrity Program.

The Levee System Integrity Program also could displace existing recreation facilities, reducing recreation opportunities and recreation-related jobs. The loss of recreation-related jobs could disproportionately affect employment of minority and low-income populations. Possible methods that could be used to alleviate these effects include providing skill training and employment relocation, providing project jobs in positions where skills can be transferred or where minimal retraining is required, providing housing relocation, and developing systems to ensure adequate water supply.

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In the long term, the Levee System Integrity Program could benefit minority and low-income populations (only in the Delta Region) by providing a certain level of protection from flooding. In the short-term, however, the program could result in potential adverse effects on minority and low-income populations

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### *Water Use Efficiency Program*

During the 1982-87 drought, many jobs were lost as a result of reduced crop acreage or landscaping in urban communities. To the extent that the Water Use Efficiency Program could improve water supply reliability, employment in these areas could be maintained. Some jobs could be created as a result of this program element, for example, installing new irrigation technology or low-flow plumbing. In all likelihood, however, these new jobs would require skilled labor. Although the Water Use Efficiency Program could increase crop yields for farmers, the program also could result in job losses for farm workers because improved irrigation technology could require fewer laborers. The loss of farm worker jobs could disproportionately affect minority and low-income populations, including migrant agricultural workers. Possible methods of alleviating this effect could include providing skill training and employment relocation assistance.

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Although the Water Use Efficiency Program could increase crop yields for farmers, the program also could result in job losses for farm workers because improved irrigation technology could require fewer laborers.

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### *Water Transfer Program*

Water transfers could reduce agricultural production at the source of the transferred water and could increase production in the regions receiving the water. Changes in employment and income could affect local economies and social well-being. Possible methods of alleviating this effect could include providing skill training and employment relocation assistance.

### *Watershed Program*

Watershed Program efforts could result in beneficial effects on minority and low-income populations. For example, surface soil and channel erosion efforts could enhance stream geomorphology by reducing sediment, which in turn could increase fishing opportunities. Increased fishing opportunities could benefit minority and low-income populations that rely on fishing for subsistence.

### *Storage*

Minority and low-income populations, including migrant agricultural workers, could benefit from or be adversely affected by the storage components of the Preferred Program Alternative. The additional water supply could result in additional agricultural land development, greater farm investments, and shifts to higher value crops. These changes could benefit minority and low-income farm workers as a result of more employment opportunities. Some land uses could shift between regions, which could require minority or low-income populations to relocate. For example, agricultural acreage could be taken out of production in the Delta Region, but the Bay Region could experience an increase in productive agricultural acreage. Effects would depend on water yield and opportunities, and on agricultural shifts within or among other regions.

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Minority and low-income populations, including migrant agricultural workers, could benefit from or experience potential adverse effects from the storage components of the Preferred Program Alternative.

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Constructing surface storage facilities could provide entry-level employment opportunities, which could benefit minority or low-income workers. Some additional employment opportunities could be developed as construction-related support industries, such as restaurants, are opened. If a surface storage facility results in new recreational opportunities, a permanent service industry base could develop. Constructing storage and conveyance facilities could remove marginal agricultural land from production, permanently close or relocate recreation facilities, and displace some home sites. Possible methods of alleviating this effect could include providing skill training, employment relocation assistance, and housing relocation assistance.



### 7.14.8 CONSEQUENCES: PROGRAM ELEMENTS THAT DIFFER AMONG ALTERNATIVES

Effects on environmental justice are discussed below only for the Delta Region. Conveyance facilities would not be modified in the other Program regions; therefore, no impacts on environmental justice are associated with the Conveyance element in the other Program regions.

#### 7.14.8.1 PREFERRED PROGRAM ALTERNATIVE

This section includes a description of the consequences of a pilot diversion project. If the pilot project is not built, these consequences would not be associated with the Preferred Program Alternative.

The Preferred Program Alternative would lead to substantial physical changes to Delta conveyance systems with the construction of a pilot diversion structure near Hood and an associated conveyance channel; channel improvements and conveyance modifications, including dredging; and the installation of fish screens and flow barriers. Some agricultural land would be converted to project use for conveyance system construction. This conversion could result in a potential adverse effect on employment opportunities for minority or low-income farm workers. Possible methods that could be used to alleviate these effects include providing skill training and employment relocation, providing project jobs in positions where skills can be transferred or where minimal retraining is required, providing housing relocation, and developing systems to ensure adequate water supply.

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Conversion of agricultural land could result in a potential adverse effect on employment opportunities for minority or low-income farm workers.

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#### 7.14.8.2 ALTERNATIVE 1

Effects under Alternative 1 would be less than those described for the Preferred Program Alternative. Agricultural land would not be converted for a pilot diversion facility or widening of the Mokelumne under Alternative 1, which could result in less potential for adverse effects on minority or low-income farm workers.

#### 7.14.8.3 ALTERNATIVE 2

Under Alternative 2, the effects would be similar to those described for the Preferred Program Alternative if a pilot diversion facility is built, although the magnitude may be greater given the difference in size of the diversion facility.



### 7.14.8.4 ALTERNATIVE 3

Under Alternative 3, the amount of direct, short-term, adverse effects is potentially greater than for all other Program alternatives because the amount of construction would be greater, as would the amount of agricultural land converted to project purposes.

Under Alternative 3, the amount of direct, short-term, adverse effects related to environmental justice is potentially greater than for all other Program alternatives because the amount of construction would be greater, as would the amount of agricultural land converted to project purposes.

### 7.14.9 PROGRAM ALTERNATIVES COMPARED TO EXISTING CONDITIONS

This section presents the comparison of the Preferred Program Alternative and Alternatives 1, 2, and 3 to existing conditions. This programmatic analysis found that the potentially beneficial and adverse effects from implementing any of the Program alternatives when compared to existing conditions were the same effects as those identified in Sections 7.14.7 and 7.14.8, which compare the Program alternatives to the No Action Alternative.

At the programmatic level, the comparison of the Program alternatives to existing conditions did not identify any additional significant environmental consequences than were identified in the comparison of Program alternatives to the No Action Alternative.

The potentially beneficial impacts associated with the Preferred Program Alternative include increased water supply and water quality, and enhanced flood control and protection.

The following potentially adverse effects are associated with the Preferred Program Alternative:

- Reducing the number of recreation-related and farm worker jobs.
- Removing people from potential restoration areas.
- Reducing accessibility to groundwater supplies.
- Moving major utility infrastructure onto land in low-income areas.
- Displacing low-income homes on or near levees.

The potentially beneficial impacts associated with the Preferred Program Alternative include increased water supply and water quality, and enhanced flood control and protection.

### 7.14.10 ADDITIONAL IMPACT ANALYSIS

**Cumulative Effects.** For a summary of cumulative effects for all resource categories, please refer to Chapter 3. For a description of the projects and programs considered in this analysis of cumulative effects, please see Attachment A.

For all regions, all projects listed in Attachment A would result in both beneficial and adverse effects on minority and low-income populations. Beneficial effects associated with these projects include increased water supply and water quality, as well as some flood



control and protection. Most adverse effects, both short term and long term, are related to constructing permanent storage or conveyance facilities and the potential loss of agricultural employment and some homes. Actions under the Preferred Program Alternative could be coordinated with present and proposed projects, thereby reducing the extent of the cumulative effects.

**Growth-Inducing Effects.** If improvements in water supply are caused by the Preferred Program Alternative, the Preferred Program Alternative could induce growth, depending on how the additional water supply was used. If the additional water supply was used to expand agricultural production or urban housing development, the proposed action would foster economic and population growth. Expansion of agricultural production and population could affect minority and low-income populations. The effect would depend on where the agriculture or population growth occurred and how it was managed.

**Short- and Long-Term Relationships.** The storage and conveyance features in the Preferred Program Alternative with the potential for short-term environmental justice effects primarily are related to construction activities. Short-term potentially adverse effects could include displacement of agricultural workers and fewer opportunities for hunting and fishing.

Overall, benefits to long-term productivity generally outweigh the short-term potentially adverse effects. Long-term beneficial effects could include increases in agricultural- or recreation-related employment, and improved opportunities for hunting and fishing to supplement diet.

**Irreversible and Irretrievable Commitments.** All Program elements that alter land use in any region could be considered to cause irreversible changes in the environmental justice resource category. Avoidance and actions to alleviate these effects could be implemented to lessen adverse effects, but changes will be experienced by future generations. The long-term beneficial irreversible changes include the potential for recreation-related or highly skilled agricultural job opportunities, as well as overall improvement in water quality and the surrounding environment. Long-term adverse irreversible changes include potential job losses due to land conversion caused by development of the Preferred Program Alternative, including reduced agricultural land from levee construction or inundation from surface storage facilities.

In addition to land conversion, storage and conveyance features could result in the irretrievable commitment of such resources as construction materials, labor, and energy resources.

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Long-term beneficial effects could include increases in agricultural- or recreation-related employment, and improved opportunities for hunting and fishing to supplement diet.

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All Program elements that alter land use in any region could be considered to cause irreversible changes in the environmental justice resource category.

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### 7.14.11 ADVERSE EFFECTS

No unavoidable adverse effects related to environmental justice are associated with the Preferred Program Alternative. Analysis at the project-specific level is needed to fully determine effects.

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Analysis at the project-specific level is needed to fully determine effects.

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Neither CEQA nor NEPA treats environmental justice effects as environmental impacts. CEQA requires a discussion of environmental and social effects only if they will lead to environmental impacts. NEPA requires a full discussion of social and environmental effects but, as with CEQA, does not treat them as environmental impacts in and of themselves. Consequently, this programmatic document fully discusses environmental justice issues, as required by NEPA but, consistent with state and federal law, does not treat adverse social and economic effects as significant environmental impacts.



